Welcome

Tri-Service Safety Conference

April 2005

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Director of Training Systems

Motorcycle Safety Foundation

MISSION

World View

U.S. Focus

> **We make motorcycling safer, and more enjoyable, by ensuring access to lifelong quality education and training for current and prospective riders, and by advocating a safer riding environment.**

Motorcycle Safety Foundation

VISION

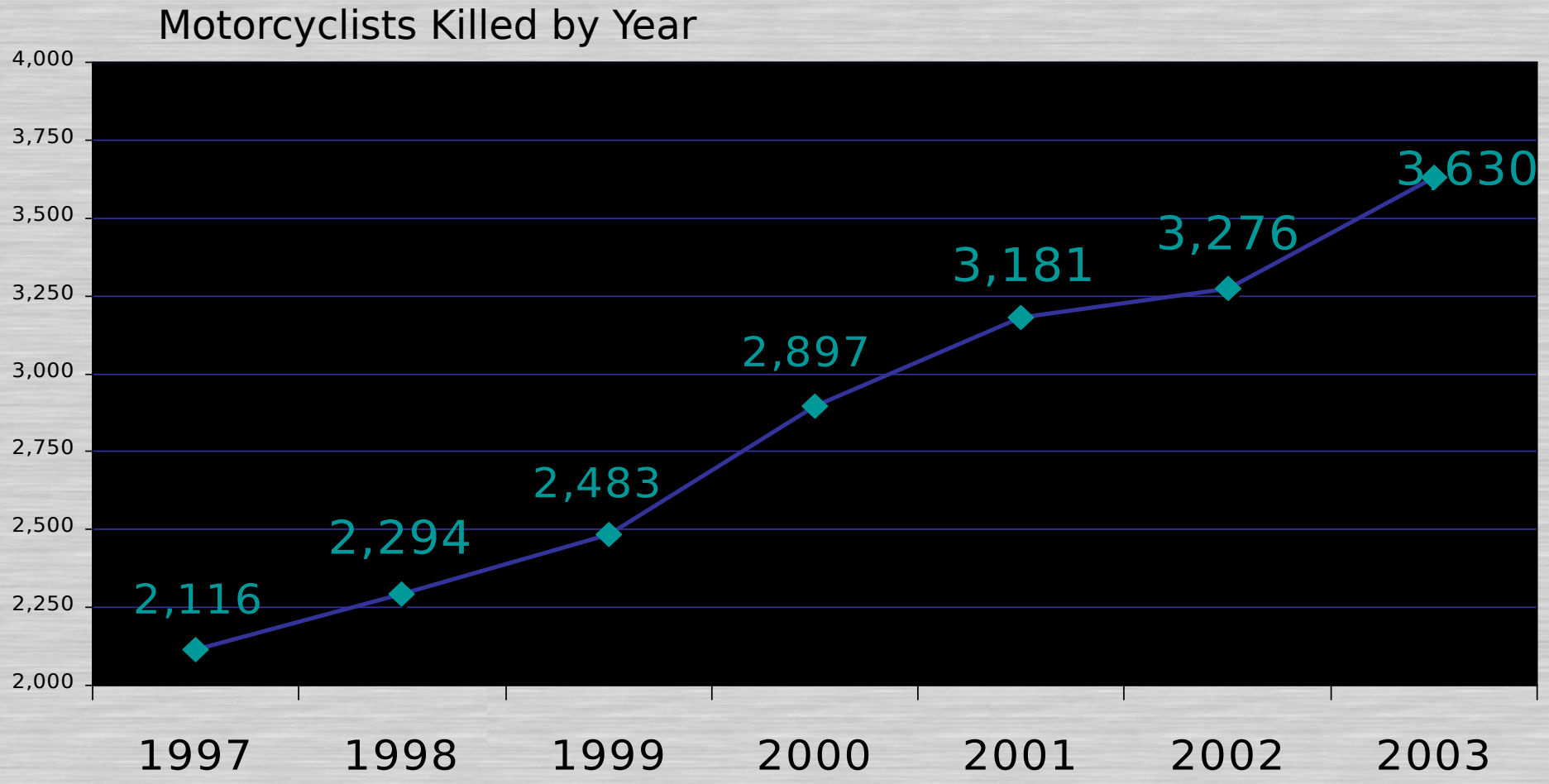
"We are an internationally recognized not-for-profit foundation, supported by motorcycle manufacturers, providing leadership to the motorcycle safety community through our expertise, tools, and partnerships."

Motorcycle Safety Foundation

MAIN MESSAGES

- Get trained and licensed
- Be a lifelong learner
- Wear protective gear
- Ride Straight
- Ride within personal

Motorcycle Deaths



FARS Data

1.0 Fatalities

per 100M VMT by 2008

U.S. Department of Transportation

U.S. Department of Transportation

U.S. Department of Transportation

Federal Highway Administration

NHTSA

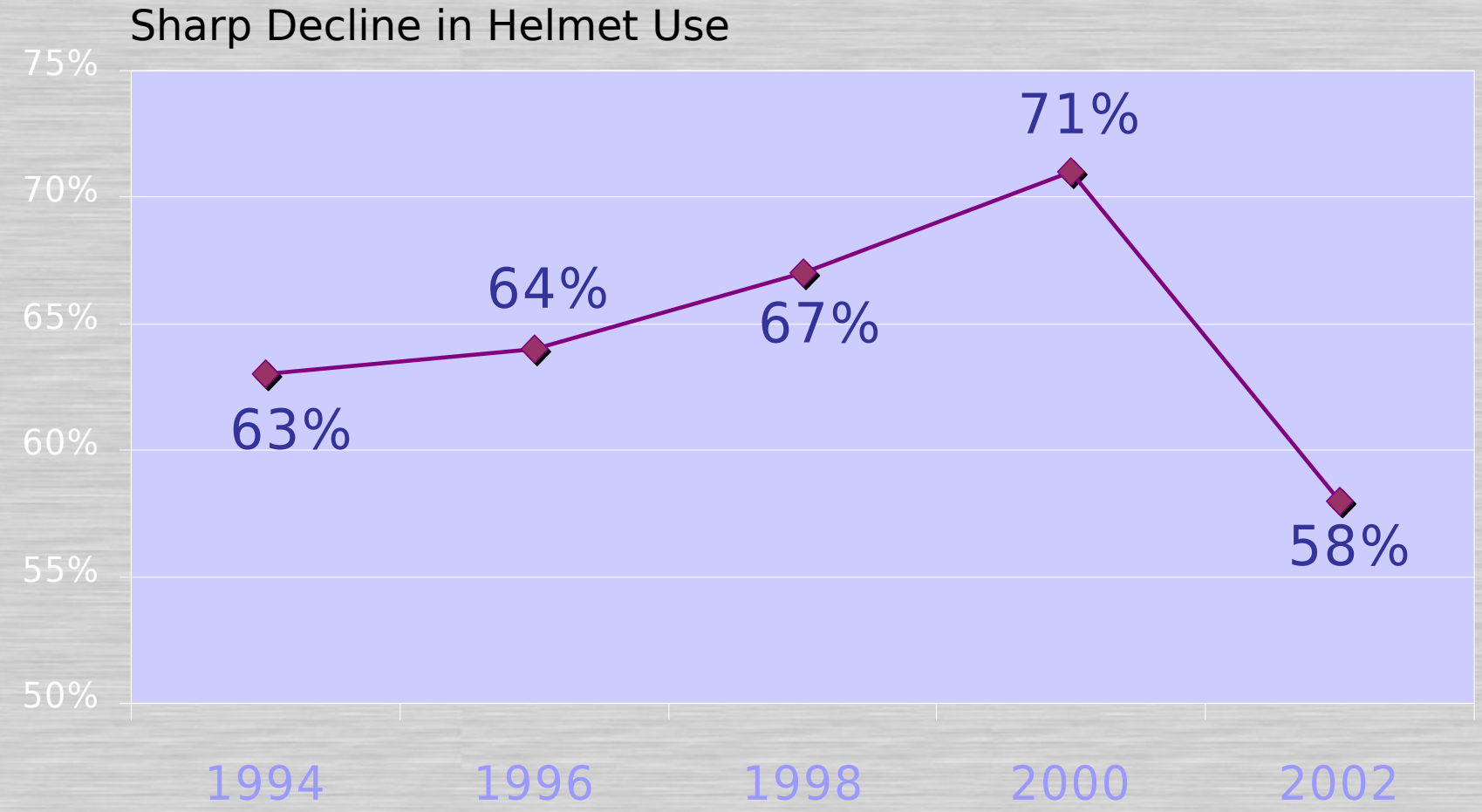
People Saving People

www.nhtsa.dot.gov

FMCSA

Federal Motor Carrier Safety Administration

Motorcycle Helmet Use



FARS, 2002

Helmet Laws Repealed: Motorcycle Deaths by Year

Year Repealed	Arkansas	Texas	Kentucky	Louisiana	Florida
1993	22	151	36	29	197
1994	25	124	33	28	172
1995	17	128	23	28	181
1996	25	115	28	28	160
1997	**19**	**117**	26	20	184
1998	28	151	**32**	35	183
1999	22	182	42	**38**	177
2000	27	227	38	57	**259**
2001	38	243	59	63	287

Occupant Fatality Rate by Vehicle Type in Alcohol-Related Crashes

	1997	1998	1999	2000	2001
Passenger Car	0.56	0.51	0.49	0.53	0.51
Light Truck	0.53	0.54	0.54	0.52	0.52
Large Truck	0.03	0.04	0.04	0.04	0.03
Motorcycle	9.72	10.40	10.60	12.60	14.00

Rates shown are per 100 Million VMT for each vehicle-type.

Source: FARS

Fatality Rates
per 100M Vehicle Miles Traveled

Fatality Rate/ 100M VMT	1997	1998	1999	2000	2001
Passenger Car	1.45	1.36	1.33	1.31	1.28
Light Truck	1.24	1.24	1.25	1.22	1.20
Large Truck	0.38	0.38	0.37	0.37	0.34
Motorcycles	21.0	22.31	23.46	27.67	33.38

NHTSA's Motorcycle Safety Program

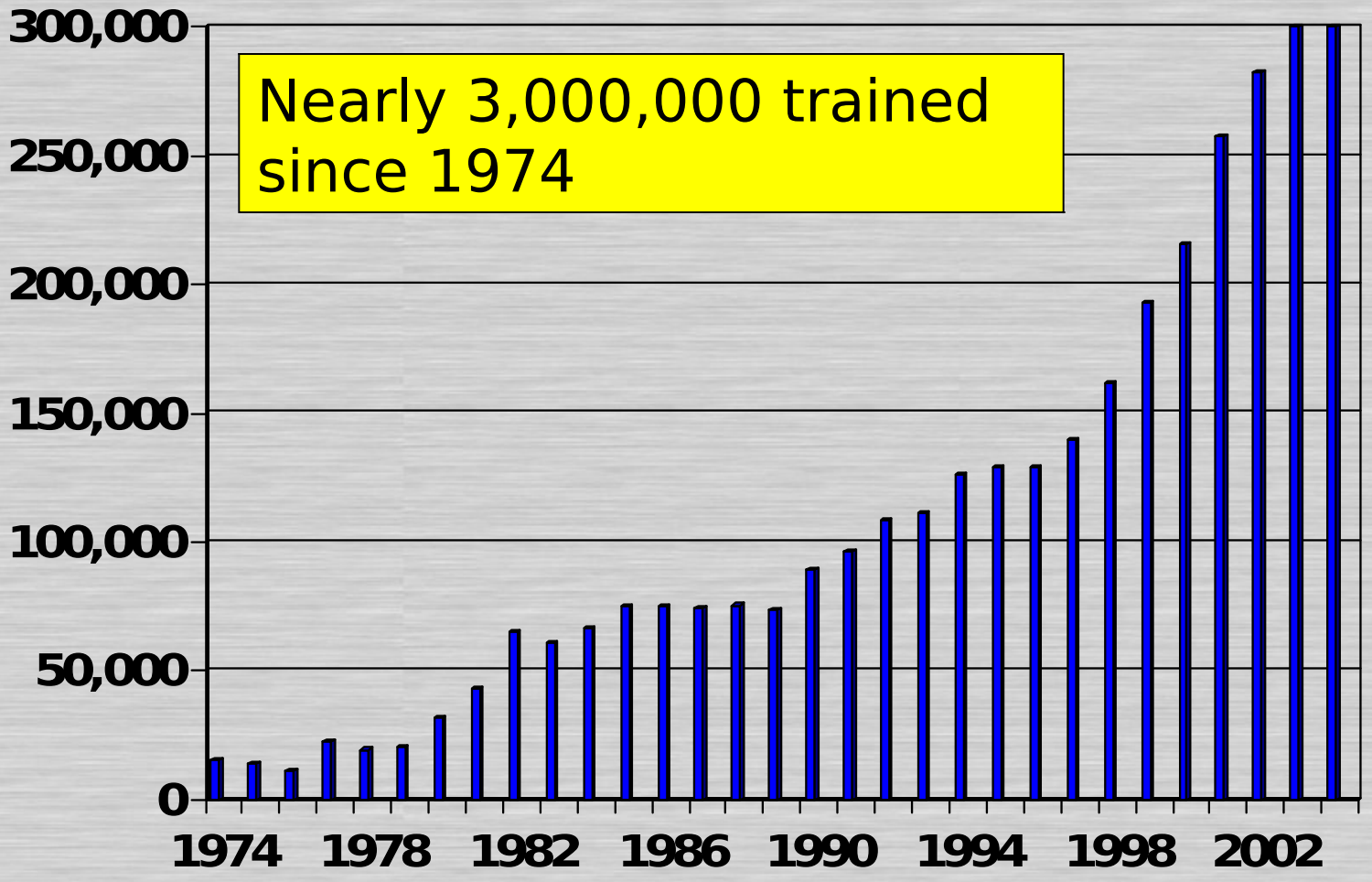
	Human Factors	Vehicle Role	Environmental Conditions
Crash Prevention (Pre-Crash)	• Rider education/ licensing • Impaired riding • Motorist awareness • State safety programs	• Brakes, tires, and controls • Lighting and visibility • Compliance testing and investigations	• Roadway design, construction, operations, and preservation • Roadway maintenance
Injury Mitigation (Crash)	• Use of protective gear	• Occupant protection	• Roadway design, construction, operations, and preservation
Emergency Response (Post-Crash)		• Automatic crash notification	• Education and assistance to EMS • Bystander care • Training for law enforcement • Data collection and analysis

Motorcycle Owner Demographics

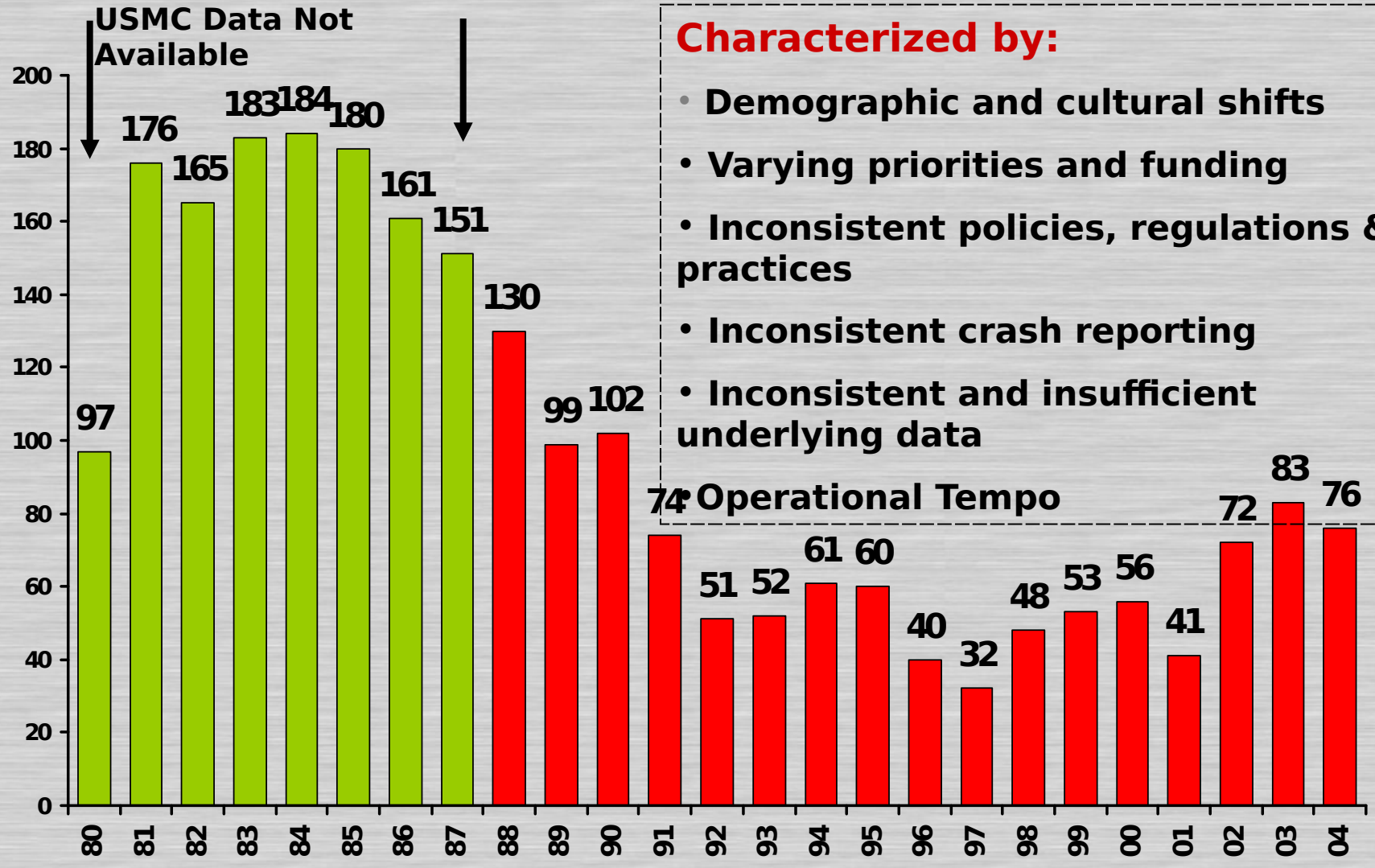
	Total On-Hwy	Total On-Hwy	Cruiser	Cruiser	Sport bike	Sport bike	Touring	Touring	Traditional	Traditional
	1998	2003	1998	2003	1998	2003	1998	2003	1998	2003
Median Age	40 yrs.	42 yrs.	41 yrs.	43 yrs.	28 yrs.	32 yrs.	47 yrs.	50 yrs.	39 yrs.	43 yrs.
Gender										
Male	91.3%	91.0%	89.6%	90.3%	97.0%	94.7%	94.5%	93.9%	89.6%	87.9%
Female	8.7%	9.0%	10.4%	9.7%	3.0%	5.3%	5.5%	6.1%	10.4%	12.1%
Marital Status										
Single	36.7%	39.8%	34.7%	37.3%	65.2%	57.3%	24.4%	26.5%	34.1%	39.5%
Married	62.4%	56.9%	63.4%	59.3%	34.8%	39.8%	75.0%	70.5%	65.4%	57.0%
Unspecified	0.9%	3.3%	1.9%	3.4%	0.0%	2.9%	0.6%	3.0%	0.5%	3.5%
Median HH Income	$45,892	$56,187	$47,800	$57,216	$46,400	$55,743	$48,100	$62,000	$43,300	$50,610

Source: MIC 1998 and 2003 Motorcycle Owner Survey.

TOTAL RIDERS TRAINED



DOD Motorcycle Fatalities



Characterized by:

- Demographic and cultural shifts
- Varying priorities and funding
- Inconsistent policies, regulations & practices
- Inconsistent crash reporting
- Inconsistent and insufficient underlying data
- Operational Tempo

Actions Planned or Underway (by service)

- DOD
  - **DODI 6055.4 in review**
  - **All services continuing ongoing motorcycle training programs**
- Army
  - **Rewriting AR 385-55**
  - **Motorcycle training funded in the POM**
- Marine Corps
  - **Motor vehicle power sports training specialists program**
  - **Intervention Program (Graduated exposure)**
- Air Force
  - **Rewriting AFI 91-207**
  - **Mentorship program**
- Navy
  - **Rewriting OPNAV instruction**
  - **Establishing infrastructure for MVPSTS**
  - **Partnering w/MSF to ensure consistency in training programs**
  - **Using MSF PSAs in Navy publications**

Recommended Way Forward

DOD, Services, Installation Policies, Regulations, Priorities, Funding

Priority 1: Add to Readiness Metrics: Fatalities, disabling injur lost-duty days, and training

Priority 1: Develop traffic safety expertise within DOD

Enforcement Practices

Priority 1: Enforce compliant helmet usage

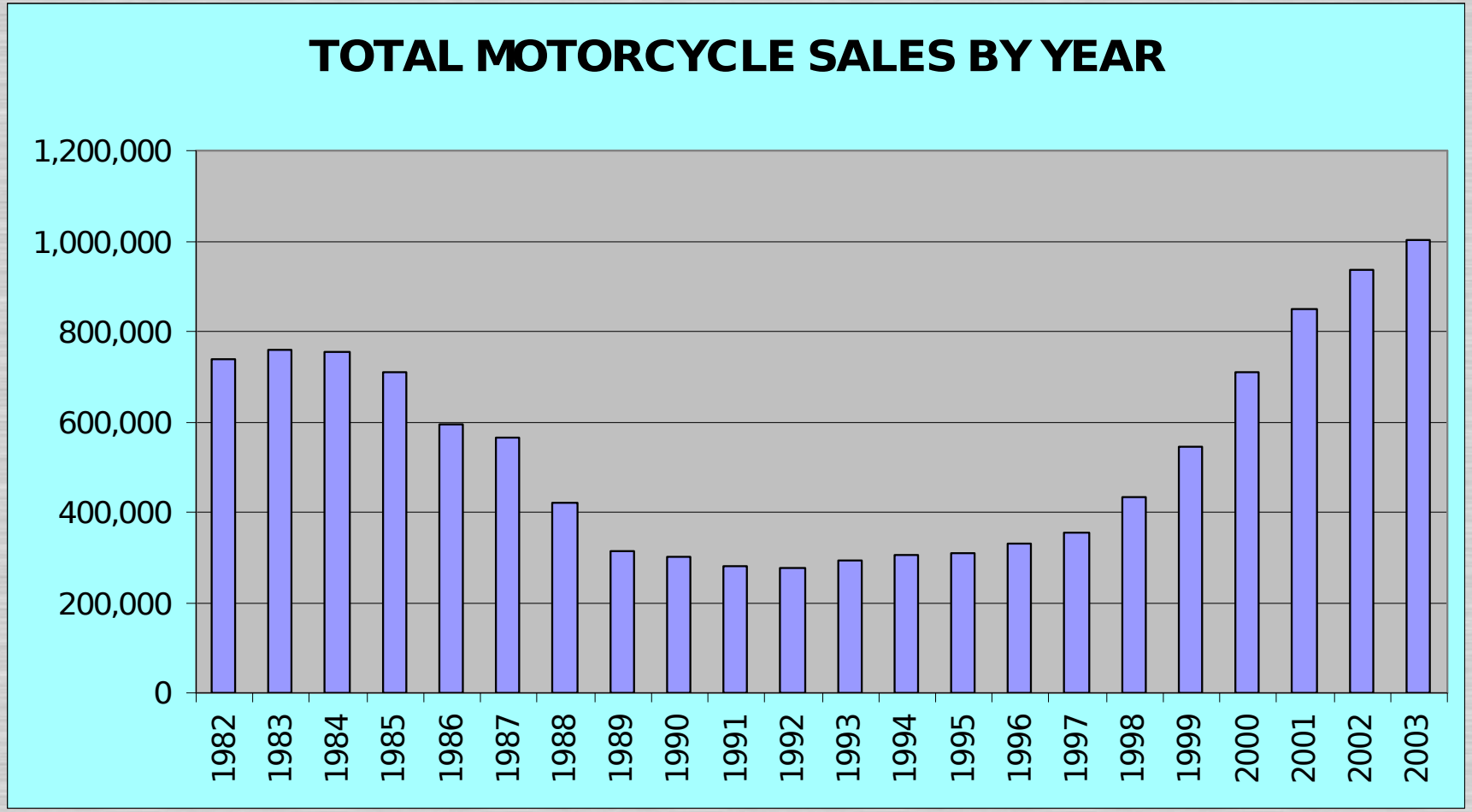
Public Information & Education

Priority 1: Include motorcycles in DOD communications plan

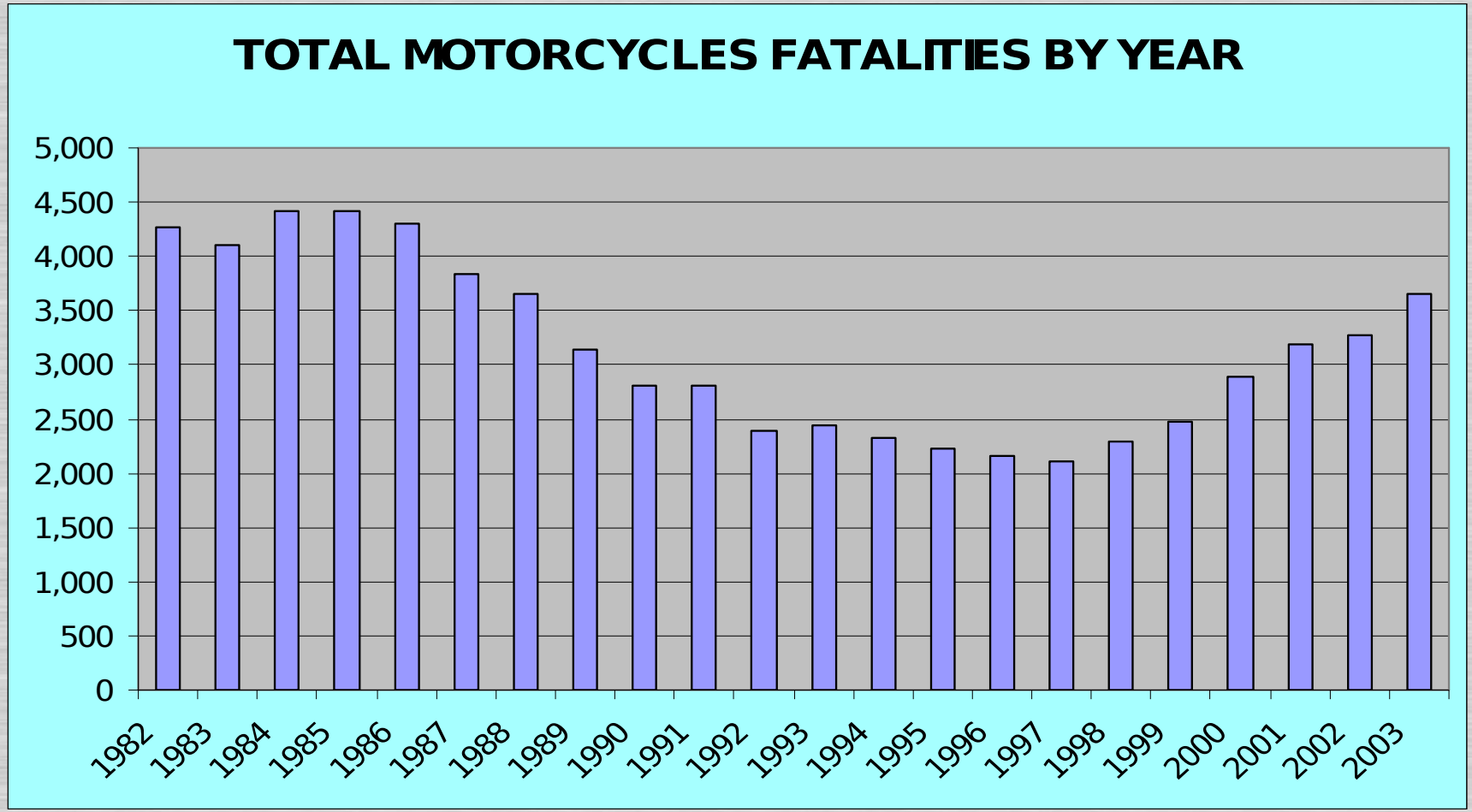
Rider Education & Training

Priority 1: Enhance safety renewal & cultural change

Motorcycle Industry Council Data



Motorcycle Industry Council Data



Recommended Way Forward

DOD Policies, Regulations, Priorities, Funding

- Implement leadership education regarding importance of countermea
- Establish DOD program evaluators for assessment and improvement
- Establish additional quantitative and qualitative metrics
- Make fatalities, disabling injuries and lost-duty days a readiness metr
- Establish motorcycle safety advisory board
- Require cost/benefit analysis of programs and countermeasures

Service / Installation Policies, Regulations, Priorities, Funding

- Develop consistency of regulations among services
- Develop traffic safety expertise within DOD
- Include motorcycle riding in annual health risk appraisal

Enforcement Practices

- Standardize data definitions & train personnel
- Enforce non-compliant helmet usage
- Capture life-cycle record & screen during new location processing

Licensing & Registration

- Develop database for motorcycle registrations
- Establish cooperation with local enforcement agencies

Public Information & Education

- Include motorcycles in DOD communications plan
- Educate Commanders on requirements
- Promote motorist awareness

Rider Education & Training

- Adopt MSF rider education system
- Enhance safety renewal & cultural change

Making the Goal
Change Behaviors

- Senior leadership involvement (walk the talk)
- Accountability
  - accountability of operators for behavior
  - accountability of leaders for supervision
- Push-pull best practices to leaders
- Develop permanent partnerships
  - Installations - partnering with local law enforcement (e.g., ride-along programs)

From 2-Course Perspective

MSF Rider Education & Training

PRELIMINARY PROGRAMS	HANDS-ON PROGRAMS	CLASSROOM PROGRAMS	OTHER PROGRAMS
	• Basic Course • Experienced Course • MILMO: Military • *DirtBike School* - Youth/Adult	• A Common Road • Care and Inspection • Group Riding • Riding Straight	• Licensing Assistance

To RETS: The System Perspective

MSF Rider Education & Training System

PRELIMINARY PROGRAMS

- **Web-Based Safety Awareness & Training**
- **(P '06) Self Assessment**
- **Spokesperson**
- **(A) Motorcyclist Awareness: Pre-Permit**
- **Product Familiarization**
- **Introduction to Motorcycling**

HANDS-ON PROGRAMS

- **(A) Basic Course**
- **(A) ERC Suite:**
- **(A) Skills Practice**
- **(A) License Waiver**
- **(A) Skills Plus**
- **(P'05) Advanced Braking & Traction Mgt. *RiderCourse***
- **(P'05) On-Road *RiderCourse***
- **(A) ScooterSchool *1***
- **Dual Sport**

CLASSROOM PROGRAMS

- **(A) Motorist Awareness**
- **M/C Maintenance**
  - Basic
  - Advanced
- **(A) Group Riding**
- **(P '05) Seasoned Rider**
- **Touring**
- **Driver's Ed**
- **Rider Improvement Violator School**
- **Mental**

OTHER PROGRAMS

- **Special Needs**
  - General
  - By Course
- **Referrals**
  - Trailers
  - Sidecars
- **Enforcement Training**
- **First Responder**
  - Pro
  - Buddy
- **Non-Rider Awareness**
- **Do Motorcycling Right**
- **Competition**
  - Adult
  - Youth
  - MX
  - Road Racing
  - Drag Racing

- **(A) AAMVA Licensing Assistance**
- **Premier Training Sites: Initial Site for Discovery Proje**

(A) = Available Now
(P) = Priority

Old ERC

RiderCourse	Classroom	Range	Extensions	Motorcycle	Notes
Old ERC	3 hours	4 hours	Optional K & S Test	Licensed; Own Motorcycle	Passenger Option; **Wait Time**

New ERC Suite

RiderCourse	Classroom	Range	Extensions	Motorcycle	Notes
Old ERC	3 hours	4 hours	Optional K & S Test	Licensed; Own Motorcycle	Passenger Option; **Wait Time**
Skills Practice *RiderCourse*	20 minutes Exercise Debriefs	4 hours		Training or Own Motorcycle	No Passengers; No Wait
License Waiver *RiderCourse*	40 minutes Classroom Cards	4-5 hours	Knowledge & Skill Tests	Training or Own Motorcycle; **State Waiver**	No Passengers; No Wait
Skills Plus *RiderCourse*	60 min Classroom Cards	hours	Skill Tests	cycle	Passenger Option; No Wait

Modules (Stand Alone & Complementary)

ERC Skill Circuit

BRC Classroom: Basic

BRC Classroom: Advanced

Perception Development

Riding Straight

Braking & Traction Management

On-Road *RiderCourse*

Seasoned Rider

Physics & Motorcycling

RETS: A Sample Progression

1. ***Dirt Bike School* (DBS) for Street Riders**
   - ***ScooterSchool***
   - **Feeders to BRC**

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2. **Basic RiderCourse**
   - –Extended
   - –Regular
   - –Formal Remedial Training (pending)

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3. **Experienced *RiderCourse* Suite**
   - –Skills Practice
   - –License Waiver

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4. **Advance Braking and Traction Management *RiderCourse***
   - **On-Road *RiderCourse***
   - –Additional Practice
   - –Skills Plus

The Motorcycle Safety Foundation Rider Education and Training System

System Underpinnin

System Underpinnings

1. Research and Experience
2. Safety and Risk Management

Principles

3. Adult Learning and Development

Principles

4. Motor Skills Development

Principles

1. Research and Experience

- Development of RETS Mission
- Review of Curriculum Specifications
- Review of Motorcycle Training and Development Processes
- Review of Research: Task Analysis; Photographic Analysis; Hurt Study; Colorado Feasibility Study
- Review of BRC (original); MRC; MRC:RSS; BBP; ERC
- Review of worldwide programs

2. Safety and Risk Management

- Culpability Theory
- Overload Theory
- Risk Taking Principles
  - General Risk
  - Moment-to-Moment Risk
  - Risk Homeostasis
- Rider Performance vs. Rider Behavior
- Renewal

3. Adult Learning & Development

- Pedagogy vs. Andragogy
- Factory Model vs. Facilitation
- Instructor-Centered vs. Learner-Centered
- Context of Meaningfulness
- Accelerated Learning,

3. Adult Learning & Development

- **Blending Education & Training**
- **Coaching as an Art, not Science**
- **Technology in Education & Training**

(Brain-Based Learning)

- **Learner meaningfulness**
- **Emotion connection**
- **Past experience as a base**
- **High challenge/Low threat activities**
- **Experiential learning (Safe Feedback)**
- **Immersion (Parallel Processing)**
- **Redundancy (Not Repetition)**

4. Motor Skills Development

- **Instructing vs. Coaching**
- **Whole vs. Part Instruction**
- **Gross vs. Fine Motor Skills**
- **Speed vs. Accuracy**
- ***Feedback***
  - **Proprioceptive**
  - **Kinesthetic**
  - **Augmented**

Motor Skills Development

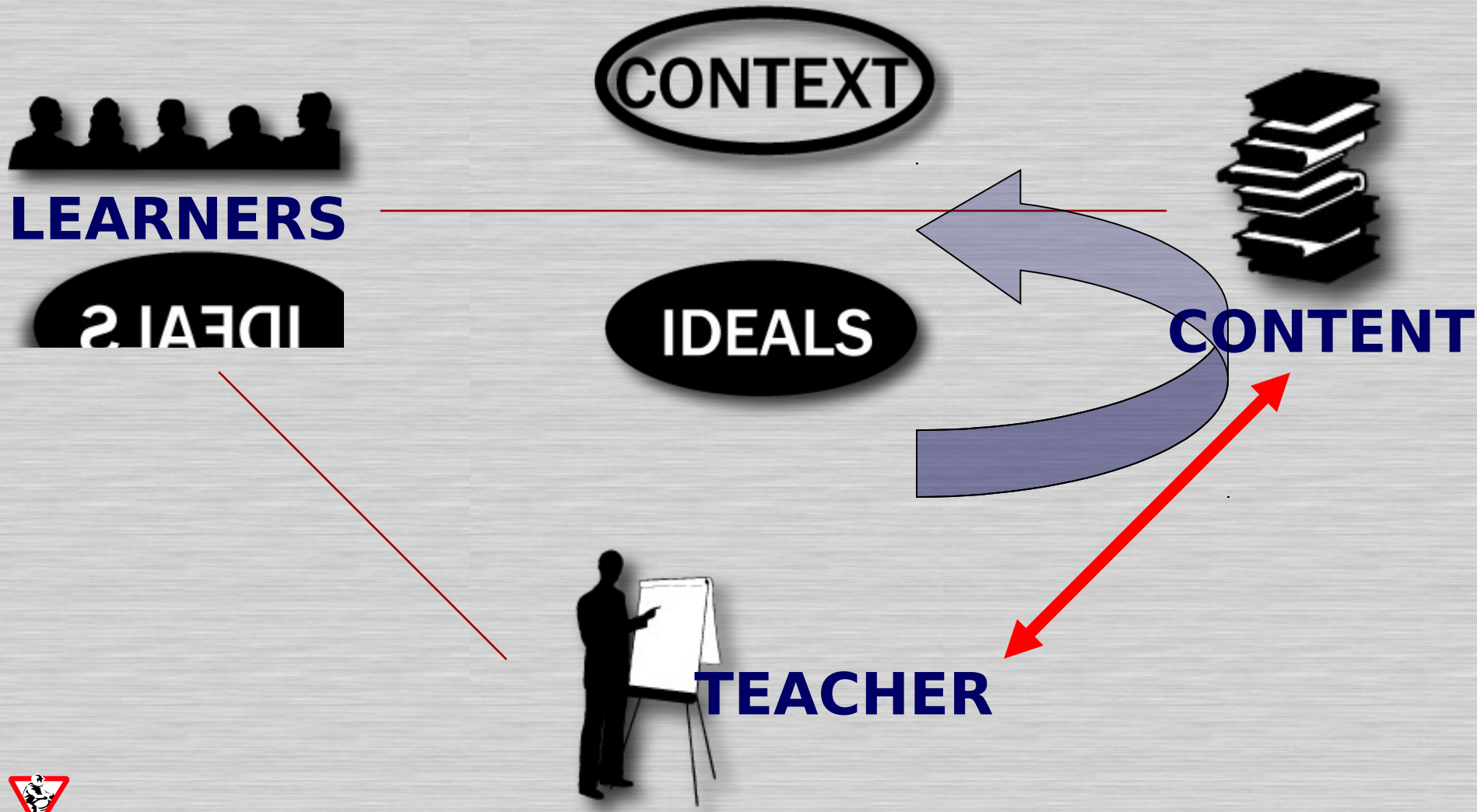
- **Mental Practice Principles**
- **Over-Coaching and Over-Verbalization**
- **Being Told vs. Practice on Own with Feedback**
- **Skill Development as Natural vs. Forced**
  - ***Natural*:**
    - **Development is subtle, progressive, and contextual**
    - **Improvement occurs with practice**

The Motorcycle Safety Foundation Rider Education and Training System

Curriculum Development

A TEACHING MODEL (Pratt)

Information-Centered (Transmit/Instruct)



A TEACHING MODEL (Pratt)

Learner-Centered (Nurture/Coach)

LEARNERS

CONTEXT

CONTENT

IDEALS

TEACHER

From .....To

Traditional Learning

- Rigid
- Somber and Serious
- Competitive
- Verbal
- Controlling
- Time-Based

Accelerated Learning

- Flexible
- Joyful
- Collaborative
- Multi-Sensory
- Nurturing
- Results-Based

Types of Learners

Dependent

Interested

Involved

Self-directed

Types of “Instructors”

1 = Powerful/Expert/Authority

2 = Popular/Motivator/Salesperson

3 = Peaceful/Relaxed/Facilitator

RiderCoach - Participant Interactions*

Self-directed Learner				
Involved Learner				
Interested Learner				
Dependent Learner				
	Authority Expert Powerful	**Salesperson Motivator Popular**	**Facilitator Relaxed Peaceful**	**Delegator Analytical Perfect**

*** Adapted from Grow's *Staged Self-Directed Learning Model* and *Personality Plus***

RiderCoach - Participant Interactions*

Self-directed Learner	***Severe Mismatch***	**Mismatch**	**Near Match**	**Match**
Involved Learner	**Mismatch**	**Near Match**	**Match**	**Near Match**
Interested Learner	**Near Match**	**Match**	**Near Match**	**Mismatch**
Dependent Learner	**Match**	**Near Match**	**Mismatch**	***Severe Mismatch***
	Authority Expert Powerful	**Salesperson Motivator Popular**	**Facilitator Relaxed Peaceful**	**Delegator Analytical Perfect**

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RiderCoach - Participant Interactions*

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Interested Learner	**Near Match**	**Match**	**Near Match**	**Mismatch**
Dependent Learner	**Match**	**Near Match**	**Mismatch**	***Severe Mismatch***
	Authority Expert Powerful	**Salesperson Motivator Popular**	**Facilitator Relaxed Peaceful**	**Delegator Analytical Perfect**

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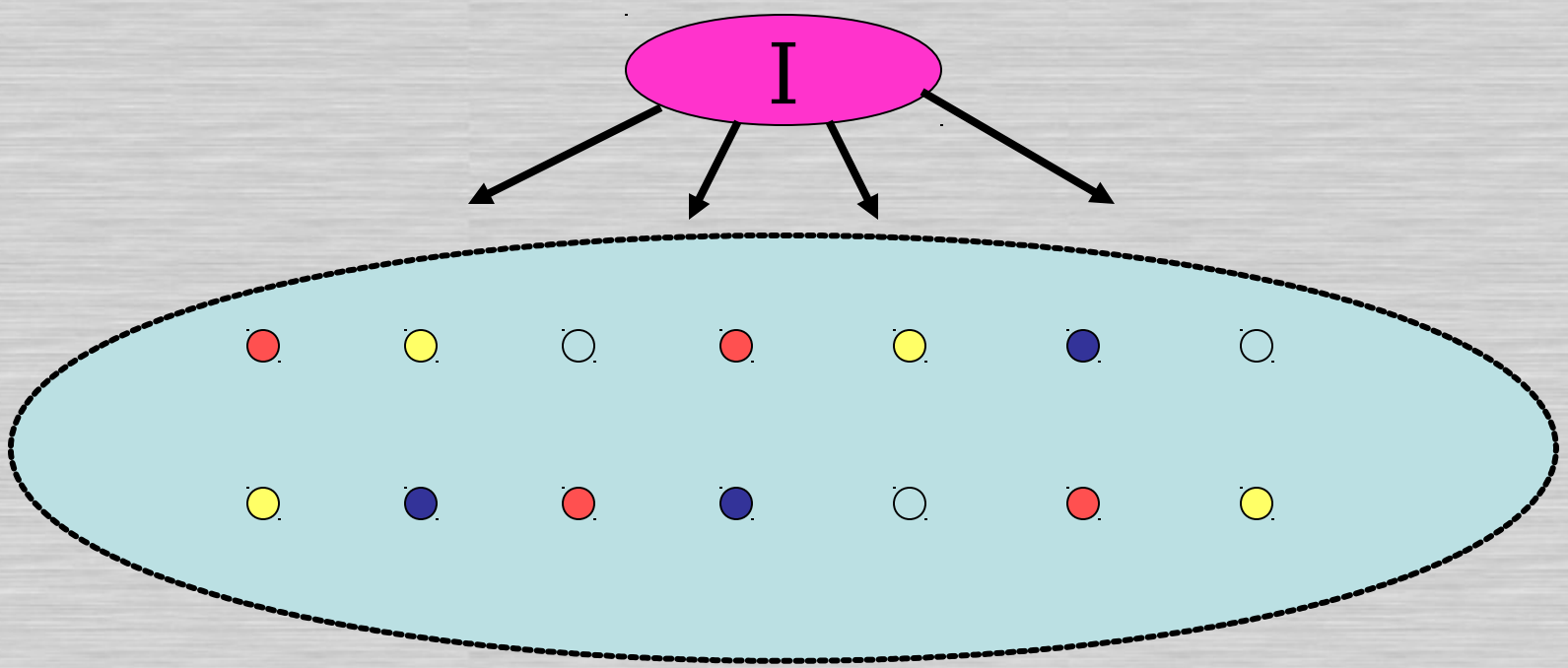
The Motorcycle Safety Foundation Rider Education and Training System

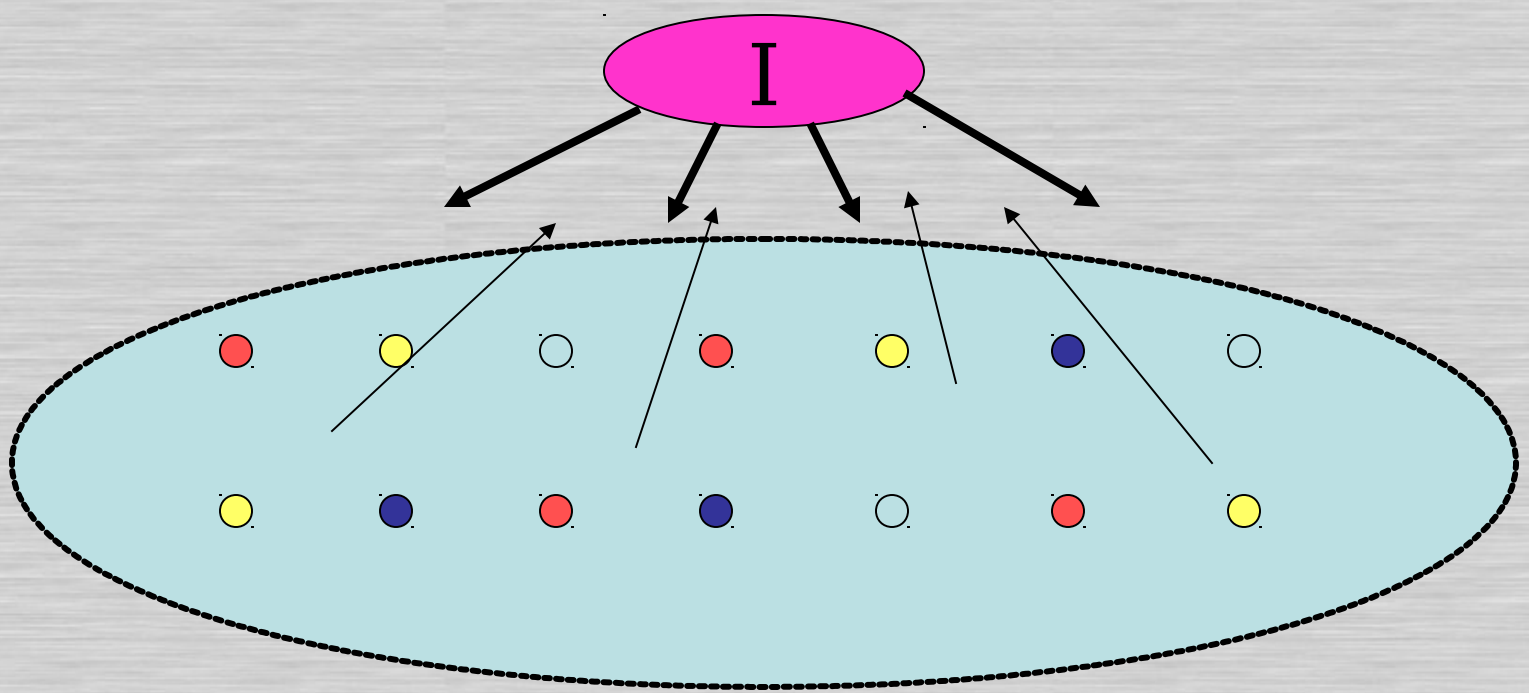
Basic Classroom

Fair to OK



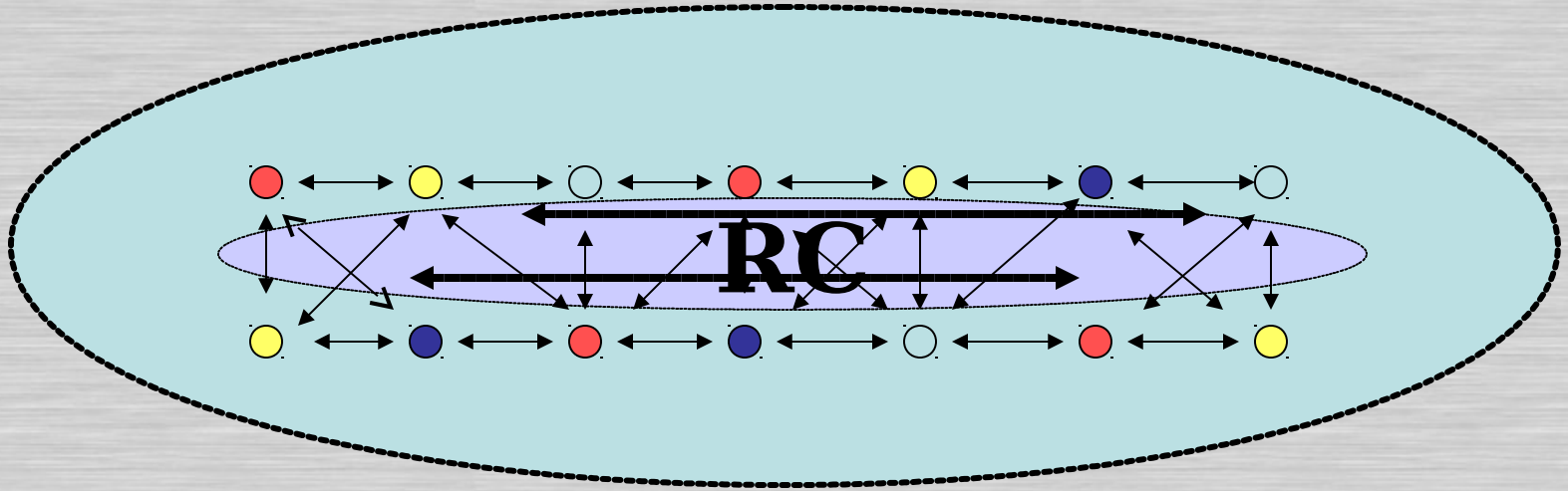
Lecture

Better



Q & A

Best



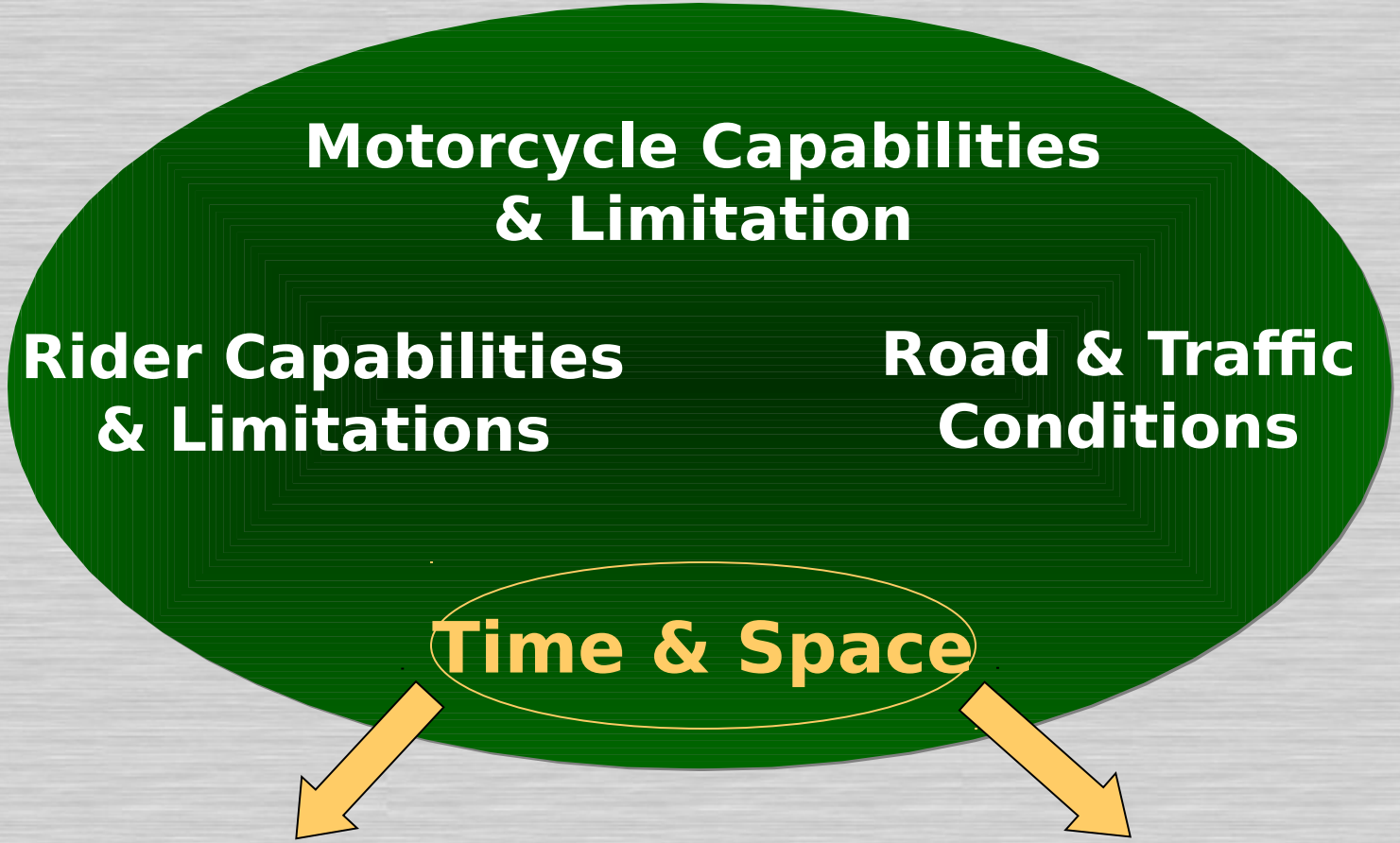
Group Facilitat

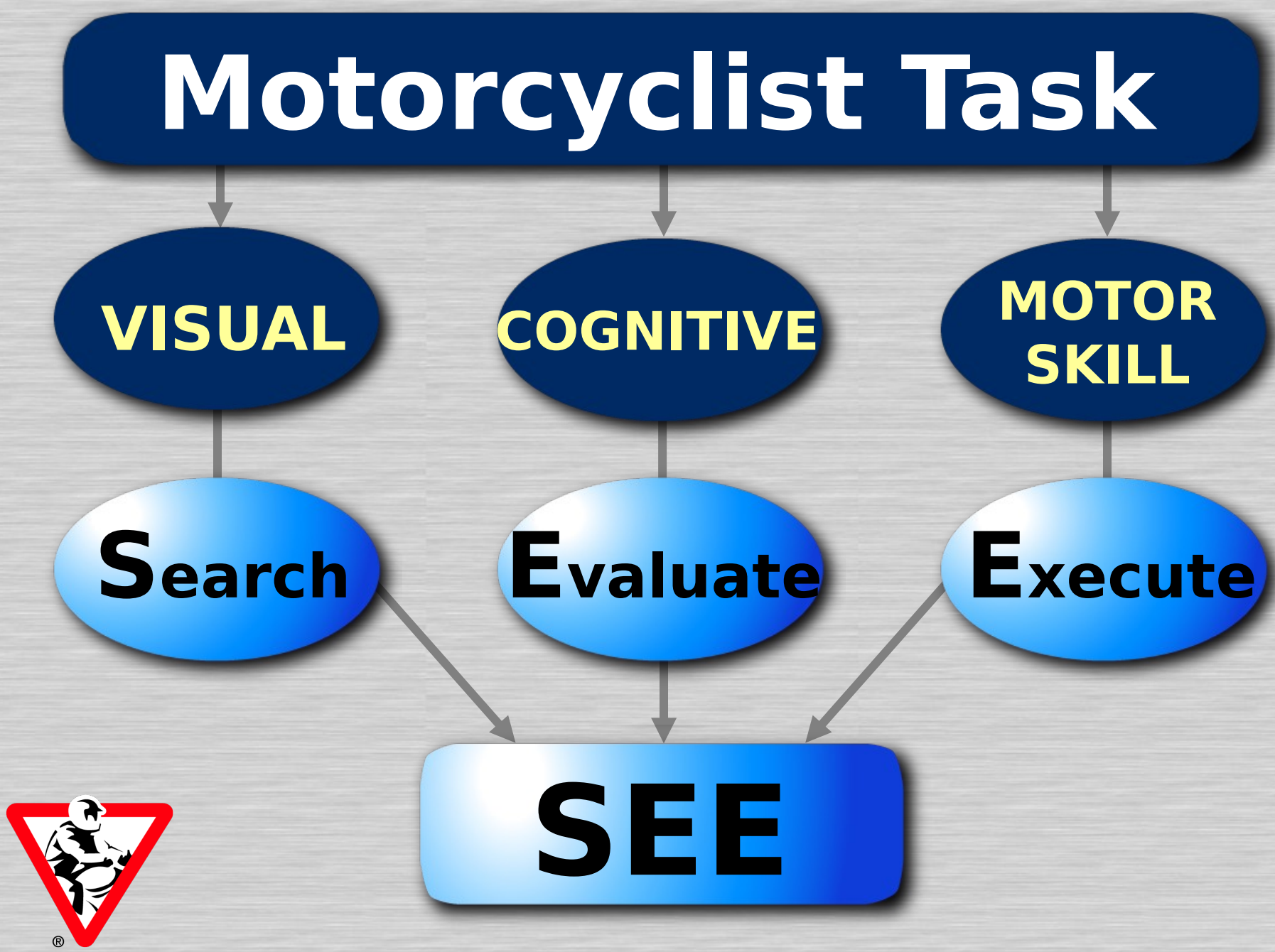
Classroom Steps (EZ-3)

1) **Setup**
2) **Activity / Discussion**
   - **Learner-Centered**
   - **Creative** ***(FEEL: Fun, Effective, Efficient, Learner-Centered)***
   - ***Why?*** ***(Why do you think this is important?)***
   - ***So What?*** ***(In what way does this help you?)***
3) **Capstone** ***(Training Aid)***

Safety Oval

RISK MANAGEMENT




Motorcyclist Task
VISUAL
COGNITIVE
MOTOR SKILL
Search
Evaluate
Execute
SEE

5 Fundamental Questions

1. What is the primary cause of motorcycle crashes?
2. What is a good rider?
3. How does a good rider reduce risk?
4. How long does it take to reduce risk?
5. What is the primary challenge in safe, responsible riding?

5 Fundamental Questions & Answers

1. What is the primary cause of motorcycle crashes? **(Interaction of factors)**
2. What is a good rider?
   (One who reduces factors s/he contributes)
3. How does a good rider reduce risk?
   (Applies a strategy—S.E.E.)
4. How long does it take to reduce risk?
   (It's a decision away!)
5. What is the primary challenge in safe, responsible riding?
   (Control personal behavior to ride within personal and situational limits)